Leidy, Robert

From: Vogel, Mindy S -FS <msvogel@fs.fed.us> **Sent:** Friday, November 13, 2015 3:51 PM

To: Leidy, Robert

Subject: RE: question about hydroriparian impacts from Barrel Alternative

Hi Rob.

I will do my best to address your questions from the email below.

First, in regards to the acreage included in Table 122.... These calculations are based on a GIS vegetation coverage, overlaid by the footprint of total project disturbance (i.e., security fence, utility corridor, primary access road, new roads, decommissioned roads, AZ trail reroute). My understanding is that we combined two sources of information to create that coverage. The first source was a generalized vegetation layer—this was good for general habitat analysis like "semidesert grassland" or "Madrean evergreen", but was not detailed enough to include areas of riparian vegetation. So we combined it with the second source, which was the Pima County riparian mapping coverage. There is no supplemental source or report that says "113 acres"—that comes from the GIS calculation itself.

Second, you asked where else is it mentioned in the EIS? This is not as simple question of a question as it may appear because that table needs to be taken in context. Table 122 is part of the Biological Resource section, and specifically is in a subsection titled "Impacts to Vegetation Communities". These calculations are geared towards analyzing losses to overall habitat range and using those losses to analyze effects to species populations. That's basically one small part of a larger biology analysis. Meanwhile, there is an entire other section "Seeps, Springs, and Riparian Areas" devoted to the analysis of what actually happens within those riparian areas, including both direct and indirect impacts.

In the SS&R section, we necessarily take a closer look at that mapping. See the "Riparian Mapping" section (p. 493-496), and then Table 110 (p. 520-521), and note in particular the variances from the Pima County mapping incorporated into the analysis (p. 521-522). That variance is pertinent to the question because it concerns "hydroriparian" areas in Barrel Canyon.

As far as the actual effects to the riparian vegetation, it's handled in two parts in the SS&R section. Indirect impacts that are common to all alternatives due to expected groundwater drawdown are in the "Indirect Effect on Riparian Vegetation" section (p. 541-546), and I would also include the "Contextual Discussion of Effects on Empire Gulch and Cienega Creek" section (p. 546-547) as an important part of indirect effects. Direct impacts vary by alternative and are covered on p. 556-564. And as with every resource section, we also summarize the impacts in one place for the reader—see Table 108 on p. 509.

If you have any further questions, please feel free to contact me. Thanks.



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From: Leidy, Robert [mailto:Leidy.Robert@epa.gov]

Sent: Friday, November 06, 2015 9:03 AM

To: Vogel, Mindy S -FS **Cc:** Goldmann, Elizabeth

Subject: RE: question about hydroriparian impacts from Barrel Alternative

Hi Mindy,

I'm hoping that you can answer a question. Table 122 (p.666) in the Final EIS for Rosemont shows that **direct** impacts to hydroriparian vegetation for the Barrell alternative is 113 acres. I am assuming that direct impacts are from activities, including fill in drainages, at the mine site.

I am interested in understanding the location (in what drainages) of those impacts and how they were determined. I can't seem to find any mention of this impact to hydroriparian except for Table 122. Is there a supplemental report from SWCA, Westlands or others that serves as the basis for this information (i.e., 113 acres)?

Thanks much!

Rob

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